

**Environmental Assessment for the
Lincoln County Overland Stage Company Route Extension
EA-NM-060-2002-0113**

September 2002

**U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
ROSWELL FIELD OFFICE
ROSWELL, NEW MEXICO**

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DECISION RECORD - FINDING OF NO SIGNIFICANT IMPACT

EA #NM-060-2002-0113

I recommend that the Proposed Action, be approved as proposed. I have determined that the Proposed Action, with the mitigation measures and stipulations described in this EA will not have any significant impacts on the natural and human environment and that an environmental impact statement is not required.

Authority of this action is the National Environmental Policy Act of 1969 (42 U.S.C. 4321,et seq.), as amended.

RATIONALE FOR DECISION

The Proposed Action would not result in any undue or unnecessary environmental degradation. Portions of the subject lands and adjacent lands have been used for similar purposes and all present and potential uses and users have been considered. The proposal is consistent with the Roswell Resource Management Plan, Fort Stanton Habitat Management Plan, Fort Stanton ACEC Plan. The entire Fort Stanton ACEC will be minimally effected by the Proposed Action. These facilities will provide the general public with an opportunity to explore the natural and cultural aspects of the Fort Stanton ACEC through a special recreation permit activity.

<u>/s/ Tim R. Kreager</u>	<u>9/17/02</u>
T. R. Kreager, AFM Resources, Roswell Field Office	Date

I. BACKGROUND

A. INTRODUCTION

Mr. Ed Heimann and his wife Martha operate as a small family business an authentic stagecoach within the Fort Stanton Area of Critical Environmental Concern (ACEC) in Lincoln County, New Mexico (Maps 1 and 2). The company name is *Lincoln County Overland Stage Company*. The stagecoach weighs 2,400 pounds, carries up to nine passengers and two drivers, and is pulled by a “four-up” horse team. The Roswell Field Office (RFO) has granted the company a special recreation permit under a categorical exclusion because Mr. Heimann uses existing two-track dirt roads on the ACEC. The stagecoach operates along an approved BLM route in a scenic setting and travels four miles or six miles round trip, three times daily. Mr. Heimann interprets the natural and cultural history and landscape for his customers, who are also visitors to the BLM-managed public land during each trip.

B. PURPOSE AND NEED FOR THE PROPOSED ACTION

Each business day Mr. Heimann moves his stagecoach and horses from and to his home in the Lincoln Valley for one mile (2.2 miles round trip) to a stanchion on Fort Stanton located next to U.S. Highway 380 and Big Tank Canyon (Figure 2). The stanchion is where Mr. Heimann meets customers and gives them their passenger and safety briefing. It is the start and end point for each trip. To arrive at the stanchion daily, Mr. Heimann must use the highway, which has been found out to be exceedingly dangerous. Vehicles of all types and sizes routinely disregard the posted speed limit of 55 mph and zoom around the enroute stage at speeds 10-20 mph in excess of the posted speed limit for that highway stretch (Figure 3). This situation has resulted in numerous near misses. Mr. Heimann’s defensive team-driving skill and excellent work horse teams have prevented tragedy, but only narrowly.

An opportunity exists to eliminate the dangerous situation in which Mr. Heimann operates by moving his daily route on U.S. 380. to a 1.1-mile strip of public land within the ACEC. Such a solution would also eliminate an exceedingly high insurance requirement of Mr. Heimann by the New Mexico Highway and Transportation Department of \$1,000,000 per occurrence, while BLM’s requirement is assessed as medium risk on the approved route, at \$300,000 up to \$1,000,000 per occurrence depending on how Mr. Heimann elects in his negotiations with his insurance company.

MAP 1: FORT STANTON ACEC

MAP 2: PROPOSED ACTION PROJECT AREA

C. CONFORMANCE WITH LAND USE PLAN

The proposed action conforms with the Roswell Approved Resource Management Plan (RMP) and Record of Decision (BLM 1997) as required by 43 Code of Federal Regulations (CFR) 1610.5-3. Specifically, the proposed action conforms with the RMP Recreation Management sections.

D. RELATIONSHIPS TO STATUTES, REGULATIONS, OR OTHER PLANS

1. The proposed action and alternatives are consistent with the Federal Land Policy and Management Act of 1976 (43 U.S.C. 1700 et seq.); the Clean Water Act (33 U.S.C. 1251 et seq.), as amended; the Endangered Species Act (16 U.S.C. 1535 et seq.) as amended; the Public Rangelands Improvement Act of 1978 (43 U.S.C. 1901 et seq.); Migratory Bird Act; Executive Order 11988, Floodplain Management; Executive Order 11990, Protection of Wetlands; and Executive Order 13112, Invasive Species.

2. The proposed action is also consistent with recreation, natural and cultural resource management goals and actions described in the *Fort Stanton Area of Critical Environmental Concern Final Activity Plan, March 2001*, NM-060-2000-0141.

II. PROPOSED ACTION AND ALTERNATIVES

A. PROPOSED ACTION

To eliminate the dangerous situation facing Mr. Heimann on U.S. Highway 380, the daily setup and take down route would be moved onto existing public land within the Fort Stanton ACEC, that conveniently connects with Mr. Heimann's house and corrals (Map 2). An old two-track ranch road, 1.1 mile long, south of and adjacent to the U.S. Highway 380 right-of-way would be used to safely move the stage from and to Mr. Heimann's private property. The proposed action route would actually parallel but not impact an original wagon and stagecoach route between Lincoln and historic Fort Stanton and other historic villages west into the Tularosa Basin.

Such a solution would also eliminate the exceedingly high insurance requirement by the New Mexico Highway and Transportation Department and fall within the BLM low risk amount of \$300,000 per occurrence. A benefit in furtherance of RMP recreation planning and marketing strategy would be an attractive view of the stage in operation by tourists traveling on U.S. 380 to or from the historic town of Lincoln

The proposed action would be implemented upon approval of this environmental assessment. The proposed action route passes between the highway and the Lower Stanton Ruin prehistoric pueblo site of the Feather Cave Archaeological Complex. Cultural clearances and surveys would be required before implementing the proposed action.

The proposed action would necessitate slightly altering the approach to two small arroyos (Map 2)

between the pueblo and the stachion. Currently the old primitive ranch road is being cut by erosion where it leads in and out of both arroyos in a curvilinear form. Figure 6 indicates how the roads would be recut. The existing two track road would be closed at each crossing and new route crossings constructed. The new crossing construction would be approximately 20 to 40 feet upslope from each present location and constructed to BLM road standards as appropriate. Road surfacing material such as gravel, rocks, or caliche would not be used; the road surface would be constructed from existing soils present at the sites. Any additional soil or mineral material that is extracted and removed during the road construction would be transported to a location designated by the Authorized Officer. The new road surface would be seeded with native grasses and shrubs and fixed by matting, such as Inca-Mat, which would further help stabilize soil. The new road crossings would remain primitive two-track type road.

Contingent to the proposed action and permit, Mr. Heimann and his interpretive staff would serve as both customer and public land stewards for the area over which they would travel and report any problems, issues or concerns to BLM. They would especially watch over and monitor the Feather Cave Archaeological Complex and pueblo site at least twice daily during their seven day per week, seven month per season operation. They would also continue to monitor the pueblo and other cultural resources natural resources during the off-season winter months.

The proposed route extension would be integrated into the Fort Stanton ACEC Transportation Plan and specifically designated horse and horse-drawn vehicle use only. Because of this designation, effective on approval of this EA, the Roswell Field Office would schedule arroyo crossing construction with its Support Staff. Once in operation on the proposed route extension, Mr. Heimann would be responsible for daily route condition inspections and report any concerns to the Authorized Officer so that appropriate and timely maintenance could be scheduled.

B. NO ACTION ALTERNATIVE

Under the No Action alternative, the existing situation would continue, which could result in a serious accident. Any impacts to the land would not occur, nor would any benefits to the permittee or RMP management goals and prescriptions.

C. ALTERNATIVES CONSIDERED BUT DROPPED FROM FURTHER CONSIDERATION

Three alternate routes were considered.

1. Alternate Route 1, (Figure 7) investigated by the permittee with BLM staff, proposed to use most of the proposed road but steer uphill around the pueblo to the south and then downhill. This route was too dangerous due to steep grades and sharp turn radii, which were problems historically, and contemporarily, resulting in out-of-control teams, crashes and serious injury or death.

2. Alternate Route 2 (Figure 8), investigated by BLM staff, proposed to cross U.S. Highway 380 onto the ACEC immediately north of Mr. Heimann's house, cross the Rio Bonito and follow the flood plain west, then cross back over the highway to the stanchion. The crossings were found too dangerous due to traffic violations and operating in the riparian habitat was counterproductive to the ACEC activity plan goals and actions.

3. Alternate Route 3, investigated by BLM staff, proposed the coach to follow the shoulder within the U.S. 380 right-of-way. This was not considered feasible by the New Mexico Highway and Transportation Department due to maneuvering and safety concerns.

III. AFFECTED ENVIRONMENT

A. GENERAL SETTING

Situated in rolling foothills and ridges which extend eastward from Sierra Blanca and the White Mountains, Lincoln County, New Mexico, the Proposed Action site areas, are located approximately 60 miles west of Roswell and 7 miles southeast of Capitan, New Mexico, on the Fort Stanton Reservation. The mountains, which reach elevations of 10,000 to 12,003 feet, are the easternmost section of the Basin and Range Province. The foothills are just within this zone, and the Proposed Action would be situated in this landscape.

To the east lie the Great Plains and the Pecos River Valley. Visitors from the surrounding areas are drawn to the area by the flowing water of the Rio Bonito, good access yet feelings of isolation in certain areas and tree shade. The Rio Bonito is a perennial stream draining the east slopes of Sierra Blanca and the high ridge extending north to Nogal Peak.

The elevation along the proposed action route averages 6,000 feet. Although the regional climate is semi-arid, the higher elevation at the Proposed Action area makes it possible for a wooded grassland to exist here instead of a desert as seen at lower elevations. Average annual rainfall ranges from 18 to 22 inches. Fertile soil is found in the Bonito Valley, and from the 1830's to present, small farming operations and orchards have existed in the Hondo and Bonito valleys.

Because of adjacent meadows, riparian corridor and uplands, quite a variety of wildlife species are found along the proposed action route. Some of the more common are: Mammals - deer, elk, raccoon, bobcat, beaver, grey fox, rabbit, ground squirrel, skunk, ringtail cat, long-tailed weasel, Southwestern Cave Bat, Big Brown Bat, Townsend's Western Big-eared Bat, Small-footed Bat; Birds - turkey vulture, wild turkey, red-tailed hawk, golden eagle, bald eagle, raven, cliff swallows, warblers, larks, Western bluebird, Western tanager, blue grosbeak, indigo bunting, gray vireo; Reptiles and Amphibians - Western Spadefoot Toad, frog species, Yellow Box Turtle, lizard species (blue collar, whiptail, spiny crevice, fence), skink species, bullsnake, Western coachwhip snake, rattlesnake species, long-nosed snake, and black-necked garter snake.

B. AFFECTED RESOURCES/CRITICAL ELEMENTS

The following critical elements have been evaluated and are either *not present or are not affected* by the Proposed Action or the alternatives in this assessment: Areas of Critical Environmental Concern (ACECs), Farm Lands - Prime or Unique, Floodplains, Minority/Low- Income Populations, Native American Religious Concerns, Wastes - Hazardous or Solid, Water Quality, Wetlands/Riparian Zone, Wild and Scenic Rivers and Wilderness.

Critical elements *affected* by the Proposed Action are: Air Quality, Cultural Resources, Migratory Birds, Threatened and Endangered Species, Water Quality-Ground, and Invasive & Noxious Weeds. Following is a discussion of *affected critical elements* and *other affected resources*.

1. Air Quality

Air quality in the region tends to be unpolluted except during periods of range or forest fire. The proposed action area is considered a Class II Air Quality Area, which allows for a moderate amount of air quality degradation. The primary source of air pollution is dust from blowing wind on disturbed surface or substratum soils.

2. Cultural Resources

Near its western terminus, the stage stanchion, the proposed route traverses a narrow corridor between the highway and the Lower Stanton Ruin prehistoric pueblo site, Feather Cave Archaeological Complex. The pueblo is located on a terrace above the route and artifacts such as pottery sherds, stone tools and flakes have washed down over the road in an 800-foot stretch.

The discussion which follows is based upon the research of Dr. Shelley, his students, and colleagues in the 1988 and 1993 field season. This research was conducted under the auspices of a multi-year research and training agreement between the Bureau of Land Management and Eastern New Mexico University, Portales.

Results of excavations indicate that Lower Stanton Ruin is composed of the remains of several adobe surface structures. Artifacts, features, and charcoal recovered from the site indicate that it is a Lincoln phase pueblo as defined by Kelley (1984). Radiocarbon analyses suggest the site was occupied between AD 1311 and 1430 (Shelley 1991:29-32).

Informant information indicates the site may have originally been vandalized by U.S. Cavalry soldiers and by U. S. Government employees in the late 19th through the middle of the early 20th centuries (Pfingsten, personal communication 1993). In addition, several lines of evidence (old correspondence, personal communications, oral history, and permits) indicate that portions of the site were also excavated by at least four other groups. In the mid 1940s, several small groups of employees of Fort Stanton were regularly granted permission to excavate at the site (Phingston, personal communication 1983).

Dr. Paul Reiter, University of New Mexico, held archaeological field schools in the area and excavated at Lower Stanton Ruin, Feather Cave, and Beth's Cave in the early 1950s (Roosa 1952; Ellis and Hammack 1968). In 1988 and 1993, Dr. Phillip H. Shelley, Eastern New Mexico University, undertook scientific excavations at Lower Stanton Ruin. The results of Shelley's investigations in 1988 are reported in Shelley 1991, and the results of the 1993 field season are currently in progress. Several instances of unauthorized excavation or looting were observed at the Lower Stanton Ruin (Wiseman, personal communication 1988; Ball, personal communication 1988). These instances of vandalism appear to have occurred between 1960 and 1987.

While this important pueblo site is relatively well-known by the public, none have become volunteers with BLM to help monitor the site. The only time the site gets monitored is when BLM resource specialists or cave program volunteers happen to be in the area, and that is usually while driving by the site at 55 mph.

3. Migratory Birds

A complete migratory bird inventory has not been completed for the ACEC. Migratory birds have been identified within the ACEC.

4. Threatened & Endangered (T&E) Species

Ten plant and animal species within the Fort Stanton region are on Federal or State threatened, endangered or sensitive species lists. Kuenzler's Hedgehog Cactus colonies occur on southeast-facing slopes one mile southwest of the Proposed Action area, and cactus inventories, with negative results, have occurred 1½-mile southwest.

Other T&E species, the Bald Eagle, Gray Vireo, Southwestern Cave Bat and Small-footed Bat, occupy habitat in the Proposed Action area.

5. Water Quality - Ground (Watershed)

The Proposed Action area forms part of a region-wide watershed pattern of upland foothills that contribute runoff to various drainages - in this case, the Rio Bonito. Action resulting in otherwise preventable erosion could impact drainage patterns.

6. Invasive & Noxious Weeds

There are known populations of Musk Thistle (*Carduus nutans L*) on public and private land from the hamlet of Busy Bee to Fort Stanton Cave.

C. OTHER RESOURCES

Other affected resources are: Karst, Soils, Vegetation and Wildlife.

1. Karst

Karst refers to geologic structure that supports caves and related features, such as sinkholes. The proposed action is located in the High Karst Potential Zone. Several caves, including Feather Cave and New Mexico's third longest - Fort Stanton Cave, are located in proximity to the Proposed Action area. No cave or karst features have been found along the proposed route.

2. Soils

The soil type present at the Proposed Action site area is the Tortugas Rock Outcrop Association - Moderately Sloping (0-15%). This shallow soil is formed from and over limestone and is located on canyon slopes and areas of rock outcrop. Water capacity is low, runoff rapid and water erosion hazard is moderate.

3. Vegetation

Trees and large shrubs observed during field examinations primarily consisted of juniper. Understory vegetation consisted of short and mid grasses.

4. Wildlife

Wildlife species inhabiting this area include mule deer, elk, coyote, rabbit, raccoon, skunk, bobcat, occasional cougars and bears, and various small rodents and reptiles. Common bird species observed include raptors, killdeer, mallard, bufflehead, mourning dove, scaled quail, and sparrows.

IV. ENVIRONMENTAL IMPACTS

A. IMPACTS OF THE PROPOSED ACTION

Following are critical elements and other resources that may be impacted by the Proposed Action.

1. CRITICAL ELEMENTS

a. Air Quality

Air quality may be reduced by dust blown off the route during stagecoach operation on the two-track road. Dust and particulate matter resulting from the proposed action would impact daily air quality only on a very temporary basis during the times the wagon travels from and to the Heimann residence. Overall, the effect to air quality would be minimal; this critical element will not be further analyzed

b. Cultural Resources

Cultural resources have been directly impacted through the illegal collection of artifacts by visitors and area residents. Prehistoric Native-American and historic Euro-American artifacts have been illegally removed from locations near the Proposed Action area, including the the Lower Stanton Ruin. If artifacts were not removed from the proposed route, trampling from horses hooves and wagon weight would pulverize them.

c. Migratory Birds

The proposed route parallels the existing U.S. 380 right of way in which ten to fifteen motorized vehicles traverse every ten minutes on average. There are no known impacts to migratory birds along the right of way that would be impacted by a slow-moving (5-10 mph) horse-drawn conveyance as opposed to posted motorized speed limit of 55 mph.

d. Threatened and Endangered Species

The most critical area of concern is the Kuenzler Cactus Habitat, with no cacti having been observed along the proposed route. With respect to animal populations, the proposed route parallels the existing U.S. 380 right of way in which ten to fifteen motorized vehicles traverse every ten minutes on average. No impacts on T & E species or habitat are expected to occur as a result of the Proposed Action.

e. Water Quality - Ground (Watershed)

If vehicle movement or other action is not controlled, resulting erosion sediments could enter the natural drainage pattern, increasing downstream sediment load. This would be a critical factor with respect to riparian habitat management along the Rio Bonito. Observations conducted within the Proposed Action area show no dramatic erosion and arroyos do not appear to be unusually full of sediment. However, the existing ranch road crosses two small arroyos (Map 2, Arroyos 1 and 2) near the western proposed route terminus in such an angle of approach that passage of horse-drawn conveyance could result in increased sediment load.

f. Invasive & Noxious Weeds

Sheley et al (1999: 151-152) and Whitson et al (2001:) provide the following information on musk thistle: “Musk thistle typically is a biennial, but may complete its life cycle as a winter annual or occasionally as an annual.” It is an “outcrossing” species but can also self-pollinate and result in one plant easily expanding into a large infestation. An average plant can produce up to 11,000 seeds, with about 33% success rate in germination. Wind, water, wildlife, livestock and human activities disperse seed. Musk thistle germination is favored on poorly vegetated sites with seedlings establishing only on bare ground, so it invades areas such as corrals, roadsides, pasture, range, ditch banks and stream banks. The seeds can survive in soil for ten or more years, so Sheley urges public and private land managers to diligently control the weed and monitor for its occurrence.

If horses and wagon wheels pick up seeds/seedheads from sources on public and private land, establishment and spread of noxious weeds may occur along the proposed and existing routes. The main mechanism for seed dispersion on proposed and existing routes is by equipment and vehicles that were previously used and or driven across or through noxious weed infested areas.

Infestations of noxious weeds can have a disastrous impact on biodiversity and natural ecosystems. Noxious weeds affect native plant species by out-competing native vegetation for light, water and soil nutrients. Noxious weeds cause estimated losses to producers \$2 to \$3 billion annually. These losses are attributed to: (1) Decreased quality of agricultural products due to high levels of competition from noxious weeds; (2) decreased quantity of agricultural products due to noxious weed infestations; and (3) costs to control and/or prevent the noxious weeds.

Further, noxious weeds can negatively affect livestock by making forage either unpalatable or toxic to livestock, thus decreasing livestock productivity and potentially increasing feed costs and animal health care costs. Noxious weeds also affect recreational uses, and reduce realty values of both the directly influenced properties and adjacent properties.

Recent federal legislation has been enacted requiring state and county agencies to implement noxious weed control programs. Monies would be made available for these activities from the federal government, generated from the federal tax base. Therefore, all citizens and tax payers of the United States are directly affected when noxious weed control prevention is not exercised.

2. OTHER RESOURCES

a. Karst

Known cave-karst features are not located near the proposed action route and would not be affected. This resource will not be further analyzed.

b. Soils

The proposed route follows an old existing ranch road which appears to be very resilient and does not show any impact to soil or vegetation. Some soil loss due to wind erosion along the proposed route is anticipated. This would be a short-term impact, occurring during use periods only. Due to reclamation stipulations any long-term soil loss impacts are anticipated to be minimal.

c. Vegetation

Vegetation beyond the existing road margins would not be impacted. Monitoring of vegetation at turn-around locations off road margins in the existing permitted route has shown surprisingly low impact over the current five-month use season.

d. Wildlife

Impacts to wildlife would be far less than that caused by the constant passing of motorized traffic in the adjacent right of way. It is probable that wildlife would be impacted, such as startled wildlife, when the stagecoach passes any given location. Such impacts would be temporary disturbances and species displacement due to Proposed Action activities is expected to be temporary. Ongoing wildlife habitat improvement projects serve to continually attract various watchable wildlife and stabilizing wildlife species to upland sites and areas. Watchable wildlife opportunities would benefit visitors while they are stage passengers.

B. IMPACTS OF ALTERNATIVES

NO ACTION ALTERNATIVE

Because this alternative denies the Proposed Action, there would be in no new environmental impacts. However, a no action alternative may reduce BLM's recreation management effort and maintain a severe safety issue regarding the permittee. Further, the Proposed Action is a multi-use activity that is addressed in and permitted in the *ACEC Final Activity Plan*.

C. MITIGATION MEASURES

Any unexpected land surface disturbance in connection with the permit operations would be reclaimed in accordance with a plan prescribed and approved by the Authorized Officer. The permittee would be sensitive to route conditions and unauthorized use activities. If conflict arises, or seems imminent, between the permittee and other users, the permittee must control its activities in favor of other users. However, the permittee, under the auspices of its permit, should contact BLM in order to resolve any conflict that may occur as a result of the Proposed Action.

1. CRITICAL ELEMENTS

a. Cultural Resources

- o Cultural clearances and surveys would be required before implementing the proposed action. The approximate 800-foot stretch of road over which artifacts have washed would be mitigated through collection and documentation of these artifacts.
- o Prior to implementing the proposed action the area where the proposed route passes through the Lower Stanton Ruin prehistoric pueblo site, the route would be archaeologically treated. A treatment plan provided by a New Mexico BLM-permitted contract archaeologist would be approved and implemented by the BLM, Roswell Field Office and New Mexico State Historic Preservation Office.
- o Contingent to the proposed action and permit, Mr. Heimann and his interpretive staff would serve as both customer and public land stewards for the area over which they would travel and report any problems, issues or concerns to BLM.
 - o They would especially watch over and monitor the pueblo site at least twice daily during their seven day per week, seven month per season operation.
 - o They would also continue to monitor the pueblo and other cultural resources natural resources during the off-season winter months.
- o Measures would be taken through BLM law enforcement and staff and public awareness to curtail the illegal collection of artifacts.
 - o The permittee and his trail maps and/or brochures would not reveal locations of known prehistoric and historic structural remains or sites, such as Feather Cave or the Lower Bonito Ruin.
 - o During each trip the exact location of the pueblo would not be revealed to the permittee's customers.
 - o The interpretive focus would be general cultural and landscape history with phrases such as "Prehistoric and historic sites are known throughout this environment," while the stage is stopped at such location that has no resources in close proximity.
 - o BLM would provide interpretive materials to the permittee so that he and his staff could accurately present environmental education to his customers on regional natural, cultural and recreational resources.
 - o The stage would pass by the pueblo without stopping. At horse-drawn speeds, the pueblo, shielded by large junipers and slope, would not be noticed by customers.
- o To prevent any possible negative impact to or loss of cultural resources, the field office archaeologist would be notified if additional cultural resources are encountered during the conduct of the Proposed Action.
 - o In the event that cultural resources are discovered during conduct of the event, the area of the cultural resources would be flagged by the permittee and avoided by all participants.

- o The field office archaeologist would be notified immediately.

o In the event that fossils of non-human vertebrate animals, or intact fossils of invertebrate animals or plants, are discovered at any stage of the event, such area would be flagged and avoided until the field office manager is notified and a decision has been reached by the BLM regarding the manner in which to proceed.

b. Migratory Birds

o Again, contingent to the proposed action and permit, Mr. Heimann and his interpretive staff would serve as both customer and public land stewards for the area over which they would travel and report any problems, issues or concerns to BLM.

- o They would monitor their route for any species observed and report this information to the wildlife biologist(s).
- o They would also use observed sightings as an opportunity to customers for environmental education about migratory and nesting birds within the Rio Bonito riparian corridor.

c. Threatened and Endangered Species

o In the event that threatened and endangered species are discovered or encountered during the daily operation, or within the Proposed Action areas, use would be discouraged or cease and Roswell Field Office staff specialists notified immediately.

d. Water Quality - Ground (Watershed)

o When slightly altering the approach to two small arroyos (Map 2) between the pueblo and the stachion Figure 6 would indicate how the roads would be recut.

- o The new road crossings would remain primitive two-track type road.
- o The existing two track road would be closed at each crossing and new route crossings constructed.
- o The new crossing construction would be approximately 20 to 40 feet upslope from each present location and constructed to BLM road standards as appropriate for a one-lane road or wagon trail.
- o Road surfacing material such as gravel, rocks, or caliche would not be used; the road surface would be constructed from existing soils present at the sites.
 - o Any additional soil or mineral material that is extracted and removed during the road construction would be transported to a location designated by the Authorized Officer.
- o The new road margin and exposed cut surfaces would be seeded with native grasses and shrubs and fixed by matting, such as Inca-Mat, which would further help stabilize soil.

- o Once in operation on the proposed route extension, Mr. Heimann would be responsible for daily route condition inspections and report any concerns to the Authorized Officer so that appropriate and timely maintenance could be scheduled.

e. Invasive & Noxious Weeds

- o Washing and decontaminating the equipment prior to daily activities would reduce or eliminate adverse impacts from Invasive & Noxious Weeds.

- o Impacts by noxious weeds would be reduced or eliminated due the the company would eradicate weed populations upon discovery.

- o The permittee would be responsible for weed control on disturbed areas within the limits of the operational area. The permittee is responsible for consultation with the Authorized Officer for acceptable weed control methods.

- o The permittee would be held responsible should the establishment of noxious weeds began to grow on the access road and well pad. Evaluation of growth of the noxious weeds would be made upon discovery. Weed control will be required on the disturbed lands resulting from this actions, which include the roads, pads and associated pipelines and on adjacent lands affected by the establishment of weeds due to this action.

- o The permittee would insure that the equipment and/or vehicles that will be used in the permitted activity would not be polluted with invasive and noxious weed seeds.

- o Transporting of invasive and noxious weed seeds could occur if the equipment and/or vehicles were previously used in noxious weed infested areas.

- o In order to prevent the spread of noxious weeds and the probability that the equipment and/or vehicles are carriers of noxious weed seeds from the conduct of previous projects in noxious weed infested areas, the Authorized Officer would require that the equipment and vehicles be cleaned with either high pressure water or air prior to daily activities.

2. OTHER RESOURCES

1. Karst

- o Cave or karst features discovered within the Proposed Action area would be flagged and avoided.
- o The BLM Cave Program managers would be notified of such discovery.

2. Soil and Vegetation

- o Precautions would be taken to prevent serious erosion.
 - o During wet weather, stage operations would cease and the route monitored by the permittee and field office staff for drying conditions conducive to avoidance of erosion and rutting.
 - o The permittee would fill in and repair any wet weather rutting his stagecoach might cause.
- o In the unlikely event of significant vegetation impact beyond left and right of the proposed route, revegetation would be expected to occur one growing season due to soil quality and higher annual rainfall.
- o If the disturbed areas do not recover within two years, reseeding and transplanting with appropriate vegetation mixes would be undertaken to influence recovery.
 - o The recommended time to seed is from June 15th through August 15th, with the optimum seeding time is in mid-July.
 - o Successive seeding would be done either late in the fall (September 15 - November 15, before first freeze) or early as possible the following spring to take advantage of available ground moisture.
- o The permittee would not disturb ongoing wildlife habitat improvement projects.

D. ALTERNATIVES

NO ACTION

No mitigation measures or benefits from mitigation measures, such as routine daily patrol of Lower Stanton Ruin or resource interpretation, would occur.

E. RESIDUAL IMPACTS

1. CRITICAL ELEMENTS

a. Cultural Resources

Increased use of the area may further damage known and unknown cultural

resources through surface disturbance and artifact collecting. Cumulative impact - as more people are attracted to the area for purposes similar to the Proposed Action, removal of artifacts and irreparable to other non-renewable cultural resources could result. The permittee in his interpretive role would influence his customers, who would also be public land visitors, on the importance of leaving natural and cultural resource in place on federally-managed lands.

b. Migratory Birds

Migratory birds primarily occupy the Rio Bonito riparian corridor, which is located about three hundred yards north of and paralleling the proposed route. The primary disturbance factor in this habitat is the U.S. 380 right of way located adjacent and between the riparian and proposed route (the riparian is north and the proposed route south of the highway). Migratory birds appear to have adapted to the intense motorized use and no cumulative or residual impacts from two daily passes of a horse-drawn conveyance would be recognized.

c. Threatened and Endangered Species

Kuenzler's Hedgehog Cactus critical habitat is located one and one-half miles southwest of the Proposed Action area. As more people are attracted to the area, impacts may occur to this population. The primary concern in the long run is cactus collecting, which has been a problem in the past. Otherwise, no other residual impacts are expected on T & E species resources. The permittee in his interpretive role would influence his customers, who would also be public land visitors, on the importance of leaving natural and cultural resource in place on federally-managed lands.

d. Water Quality

Rutting and other erosion cause and effect could require greater funding cost to recover and stabilize soils along the proposed route if other uses than the stagecoach allowed on the proposed route.

3. MITIGATION

Mitigation of residual and cumulative effects would be accomplished through long-term monitoring, maintenance and planning by the Roswell Field Office Law Enforcement and Resource staff. During the Proposed Action BLM staff would monitor and report back to Roswell Field Office staff any adverse effects occurring during or resulting from the Proposed Action.

F. CUMULATIVE IMPACTS

Population increases and concomitant recreation demand pressure, and the continued attraction of Fort Stanton as a recreation destination are considered the primary multipliers of cumulative resource degradation effects in the future. There may also be positive effects resulting from environmental education and law enforcement effort.

Increase in regional metropolitan populations and concomitant recreation demands may also impact Fort Stanton's natural, cultural and recreational resources. Other Southwest recreation sites, areas, parks and lakes have experienced a general increase in resource degradation within the past fifteen years. This trend

is expected by recreation planners to continue until the public becomes more aware of ecological concepts and concerns.

Unknown and unforeseen conditions, such as flooding, buried cultural resources, substantial use increase, or public concern and safety, may affect parts of or all Proposed Action activities, in which case mitigation, adjustment of use patterns and modifying amendments to this EA could be necessary.

V. CONSULTATION AND COORDINATION

The following individuals have been consulted regarding the Proposed Action:

Ed and Martha Heimann, Permit Applicants

Bill Murry, Park Manager, Valley of Fires Recreation Area, Roswell Field Office

Paul Happel, Natural Resource Specialist, Roswell Field Office

Marcia Menz, Law Enforcement Ranger, Roswell Field Office

Review Signatures

ENVIRONMENTAL ASSESSMENT CHECKLIST

2002

EA NUMBER: NM-060-2002-0113 SERIAL NO: PREPARER: MICHAEL J. BILBO, ORP			ACTION TYPE: Special Recreation Permit PROJECT NAME: Lincoln County Overland Stage Company Route Extension APPLICANT: Ed Heimann		
RESOURCE/ACTIVITY	NOT PRESENT	NOT AFFECTED	**MAY BE AFFECTED	REVIEWER SURNAME	DATE
Vegetation				Range Management Specialist /s/ Joseph Navarro	8/23/02
Invasive & Noxious Weeds*				Range Management Specialist /s/ Joseph Navarro	8/23/02
Air Quality*				Hydrologist /s/ Michael McGee	9/3/02
Wetlands/Riparian Zones*					
Floodplains*					
Soils/Watershed					
Lands/Realty/ROW				Realty Specialist /s/ Irene Gonzalez	8/20/02
Prime/Unique Farmlands*					
Water Quality Drinking /Ground*				Geologist /s/ John Simitz	9/13/02
Mineral Materials				Geologist /s/ Jerry Dutchover	9/13/02
Mining Claims					
Threatened or Endangered Species*				Wildlife Biologist /s/ Rand French	9/9/02
Areas of Critical Environmental Concern*					
Wildlife Habitat					
Native American Religious Concerns*				Archeologist Pat Flanary	9/12/02
Cultural Resources*					
Wild/Scenic Rivers*				Outdoor Recreation Planner Michael J. Bilbo	8/11/02
Wilderness*					
Cave/Karst Resources					
Outdoor Recreation					
Visual Resources					
Access/Transportation				Environmental Coordinator /s/ Howard Parman	8/16/02
Minority/Low- Income Populations /Comm.*					
Waste s, Hazard ous/So lid				Haz-Mat Coordinator	CFO-Zone

* "Critical Element": Must be addressed in all NEPA documents. ** "Affected Element": Must be addressed in the attached EA.

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